

MASS. TC40. 2: R28



replacement/transit improvement study

SOUTH END

ROXBURY

DORCHESTER

MATTAPAN

有甚麼事發生了.....

What happened. . . .

將會有甚麼事跟着發生？

. . . . and what's happening next ?

¿ que' ha pasado

. . . . y que pasará ?



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estudio de reemplazamiento y mejoras de tránsito

SOUTH END

ROXBURY

DORCHESTER

MATTAPAN

¿En qué consiste el Estudio de Reemplazamiento y Mejoras de Tránsito?

Es un análisis de las necesidades de transportación en los vecindarios del South End, Roxbury, Dorchester y Mattapan. Los resultados del estudio serán usados por la Autoridad de Transporte de la Bahía de Massachusetts (MBTA) para decidir qué servicios se proveeran en la zona cuando se relocalice la Línea Anaranjada al Southwest Corridor y se elimine el tren elevado de la calle Washington.

¿Por qué se está haciendo este Estudio?

En 1972, concluido el Plan de Transporte de Boston (BTPR), fueron cancelados los planes para la construcción de la supercarretera del suroeste. El entonces Gobernador Sargent, con el apoyo de residentes de las zonas afectadas, decidió relocalizar la Línea Anaranjada a terrenos adquiridos para la supercarretera. Se reconoció también la necesidad de estudiar otros tipos de transportación en la zona para reemplazar al tren elevado de la calle Washington una vez relocalizado el servicio al Southwest Corridor.

El estudio culminará con la publicación del documento "Análisis de Alternativas/ Impacto Medioambiental (AA/DEIS)," donde se presentará la información necesaria para implementar servicios de transportación nuevos o mejorados.

¿Quién dirige el Estudio?

El Estudio está bajo la dirección del Departamento de Planificación y Desarrollo de la MBTA con el Sr. Pedro C. Calcaterra como gerente del proyecto. Los ingenieros y arquitectos de la oficina de Tippetts-Abbett-McCarthy-Stratton (TAMS) están a cargo del análisis bajo contrato con la MBTA.

¿Qué ha pasado?

La primera fase del estudio, llevada a cabo en 1977-78, analizó las necesidades de transportación de residentes de la zona. Se recomendaron varios medios de transporte (autobuses y tranvías) y varias rutas. Durante la segunda fase, iniciada en 1981, se analizaron en detalle las características de cada una de las alternativas, incluyendo costos de construcción, operación y mantenimiento; número de pasajeros que usarían las alternativas; impacto en el medioambiente y en el desarrollo económico de la zona; y métodos de construcción. Durante fines del 1984 y en 1985 se llevaron a cabo reuniones comunales para presentar y discutir las varias alternativas y recibir comentarios de residentes de las zonas afectadas. Este panfleto presenta un sumario de las características de las alternativas bajo consideración.

¿Cómo se seleccionará la alternativa que reemplazará al Elevado?

Durante el verano de 1985 se publicará el AA/DEIS con todos los detalles de las alternativas analizadas durante el estudio. Se anunciará una Audiencia Pública donde residentes, organizaciones comunales, estatales y federales podrán expresar sus opiniones y preferencias. El testimonio público se incorporará al AA/DEIS y será considerado por el Gobernador y el Secretario de Transporte del Estado de Massachusetts en sus deliberaciones y selección del servicio de transportación para la zona. Se anticipa que la implementación del nuevo servicio podrá iniciarse una vez derumbado el Elevado a mediados de 1988.

¿Cómo puede Ud. recibir más información?

El documento AA/DEIS estará disponible en las sucursales de la Biblioteca Pública de Boston y en agencias comunales. Para saber cuándo y dónde estará disponible y la fecha de la Audiencia Pública, llame a: Pedro Calcaterra, 722-3366.

the study...

Summer 1985

what is it?....

如欲看中文總結,請轉最後頁。

what happens next?

What is the Replacement/Transit Improvement Study?

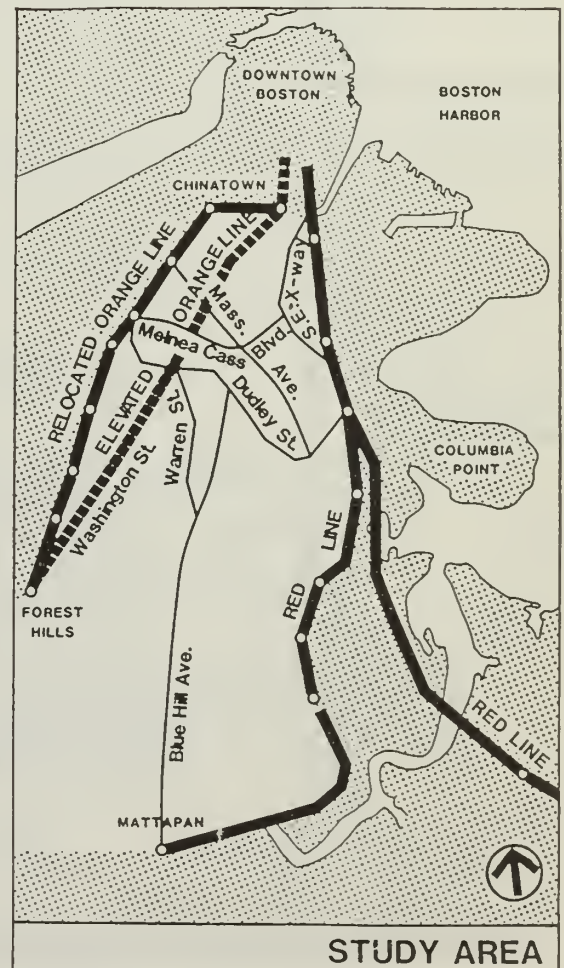
The study is an analysis of current and future public transportation needs in the South End, Roxbury, Dorchester and Mattapan areas of Boston. The purpose is to decide on specific transit services to be provided upon removal in 1987 of the existing Orange Line - Washington Street Elevated and to develop an overall transportation plan for the area.

Why is this study being done?

In 1972, after the Boston Transportation Planning Review (BTPR), construction of the proposed Southwest Expressway was cancelled. Governor Sargent concluded, along with residents of those neighborhoods, that the Washington Street Elevated Orange Line should be relocated and built along the corridor cleared for the expressway. At that time, it was recognized that some form of transportation service to replace the existing Orange Line and improve service to Dorchester and Mattapan would be needed.

Who is conducting the study?

The study is being managed by the MBTA's Planning Development Office with Mr. Peter C. Calcaterra as project manager. Assisting the MBTA in the study are several consultant firms headed by Tippetts-Abbett-McCarthy-Stratton . (TAMS).



Where are we now?

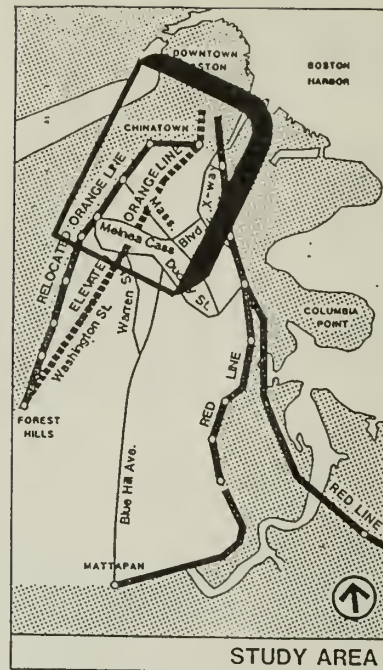
Phase I (1977-78) analyzed the travel needs of people in the study area resulting in a series of light rail and bus alternatives which were incorporated in a report to the Urban Mass Transportation Administration. Phase II, started in the Fall of 1981, involves detailed examination of the physical, social, environmental, economic and operational characteristics of alternatives.

An Alternatives Analysis/Draft Environmental Impact Statement (AA/DEIS) is being prepared. It analyzes alternatives in the "Replacement Corridor"--the section of the study area between Dudley Station and Downtown. Analysis of bus routes outside the Replacement Corridor is continuing under the direction of the MBTA's Service Planning Department, as part of another study, and they will soon be soliciting additional community input. Increased Washington Street bus service via Routes 42 and 49 will be provided between the time the Orange Line is relocated and replacement service begins.

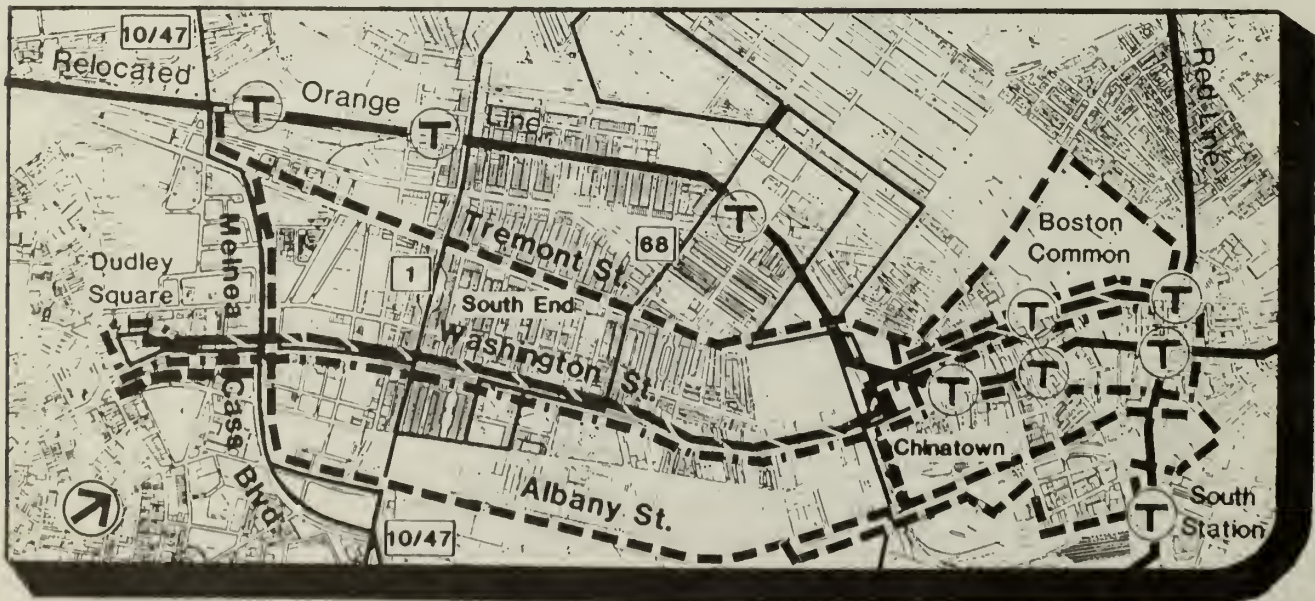
Replacement corridor

Various bus, light rail, and trackless trolley routes have been investigated in the corridor between Dudley Station and Downtown.

The map below shows the alternative alignments. The modes themselves are described on the following page.



The above map locates the Replacement corridor which is shown in the enlarged plan below. This area is most affected by the relocation of the Orange Line.



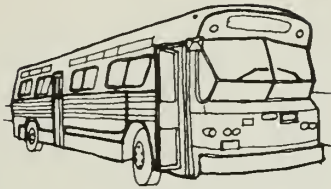
REPLACEMENT CORRIDOR SERVICE ALTERNATIVES

LEGEND

- | | |
|--|-------------------------------------|
| --- WASHINGTON ST. REPLACEMENT
BUS SERVICE OR TRACKLESS TROLLEY | — REPLACEMENT
LIGHT RAIL SERVICE |
| --- TREMONT AND ALBANY ST.
REPLACEMENT BUS SERVICE | — OTHER BUS ROUTES |

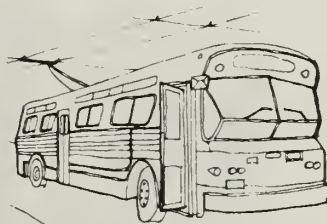
ALTERNATIVES UNDER EVALUATION

Bus



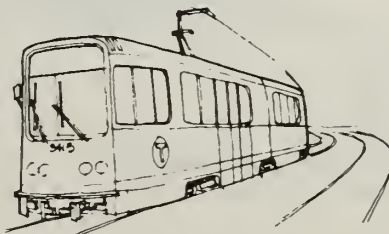
Two bus options have been evaluated for replacement service. One runs along Washington Street and the other uses a pair of bus routes along Tremont Street and Albany Street instead of Washington Street. Buses would go into Downtown in four possible ways as shown on the Replacement Corridor Service Alternatives Map:

1. South Cove Loop - with buses going around the Quincy School
2. Downtown Crossing Loop - circling the shopping district
3. Boston Common Loop - similar to the existing No. 43 bus route
4. South Station Loop - similar to the route now used by express buses off the Mass. Pike



Trackless Trolley

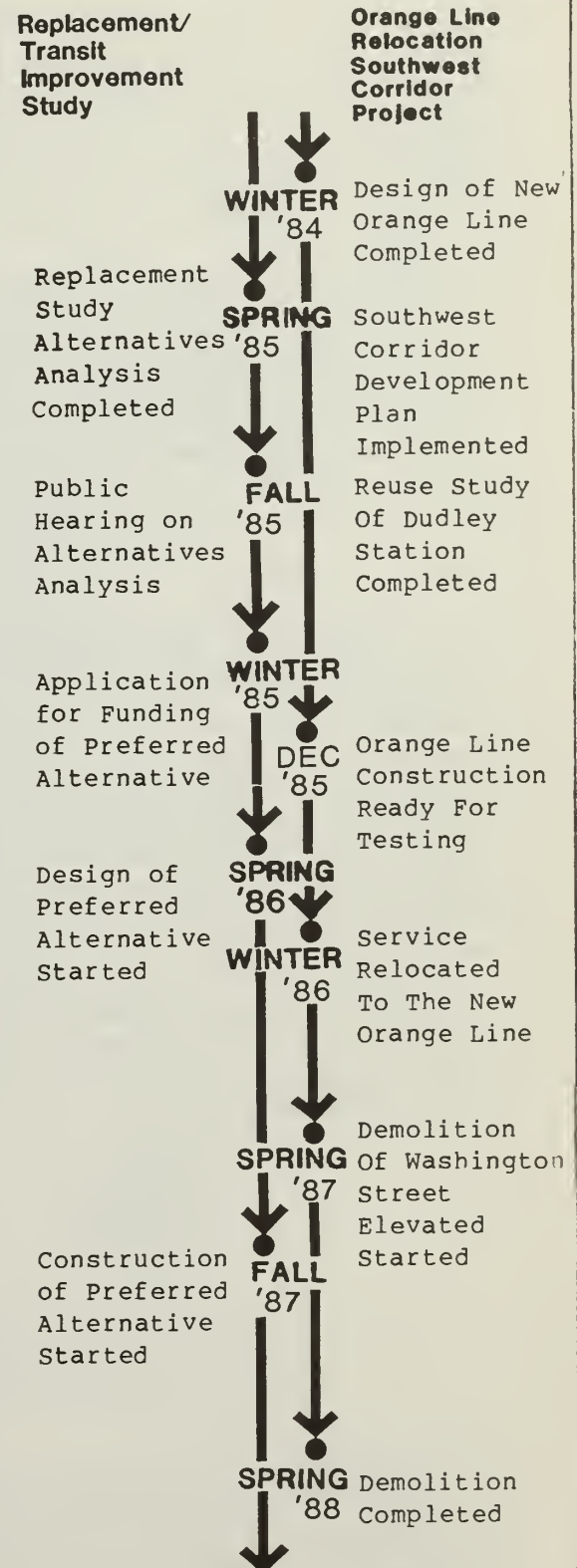
The trackless trolley is a bus that uses overhead electric power. The MBTA now runs these in Cambridge and Watertown. If a trackless trolley is implemented, it most likely would use the South Cove Loop for connecting to downtown.



Light Rail

The light rail alternative would be an extension of the Green Line, running from Dudley Station into Boylston Station and beyond.

Schedule



The above schedule shows the milestones for the Replacement/Transit Improvement Study being worked on in conjunction with the Southwest Corridor Project.

Chinatown

BUSES

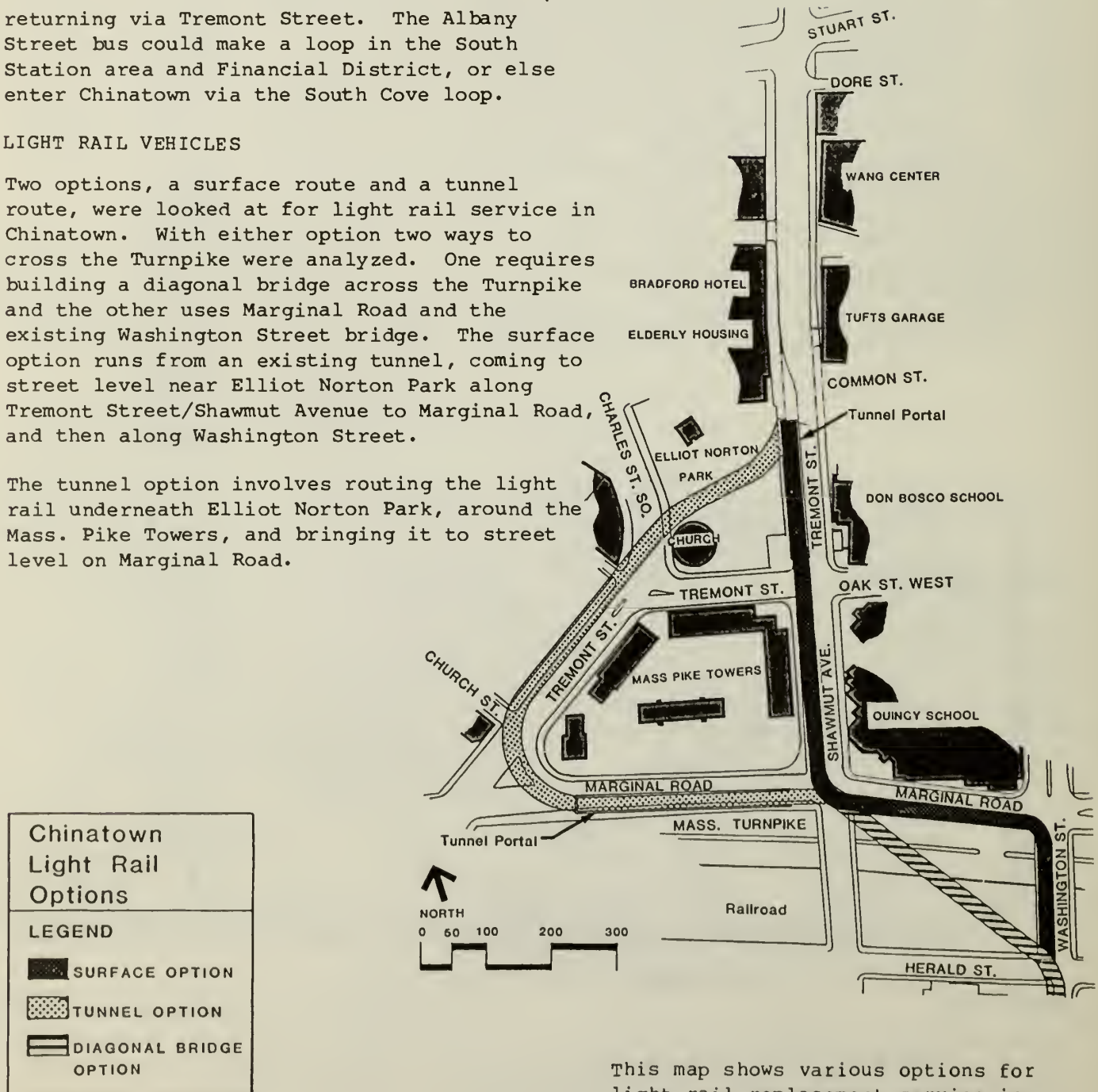
A bus running along Washington Street would either turn on Oak Street around the Quincy School and return to Washington Street via Shawmut Avenue and Herald Street; continue downtown on Washington and return via Tremont Street; or continue on Charles Street around the Boston Common and return via Tremont Street.

The paired bus alternative on Tremont and Albany streets has fewer buses that enter Chinatown. The Tremont bus would make a loop around the Boston Common via Charles Street, returning via Tremont Street. The Albany Street bus could make a loop in the South Station area and Financial District, or else enter Chinatown via the South Cove loop.

LIGHT RAIL VEHICLES

Two options, a surface route and a tunnel route, were looked at for light rail service in Chinatown. With either option two ways to cross the Turnpike were analyzed. One requires building a diagonal bridge across the Turnpike and the other uses Marginal Road and the existing Washington Street bridge. The surface option runs from an existing tunnel, coming to street level near Elliot Norton Park along Tremont Street/Shawmut Avenue to Marginal Road, and then along Washington Street.

The tunnel option involves routing the light rail underneath Elliot Norton Park, around the Mass. Pike Towers, and bringing it to street level on Marginal Road.

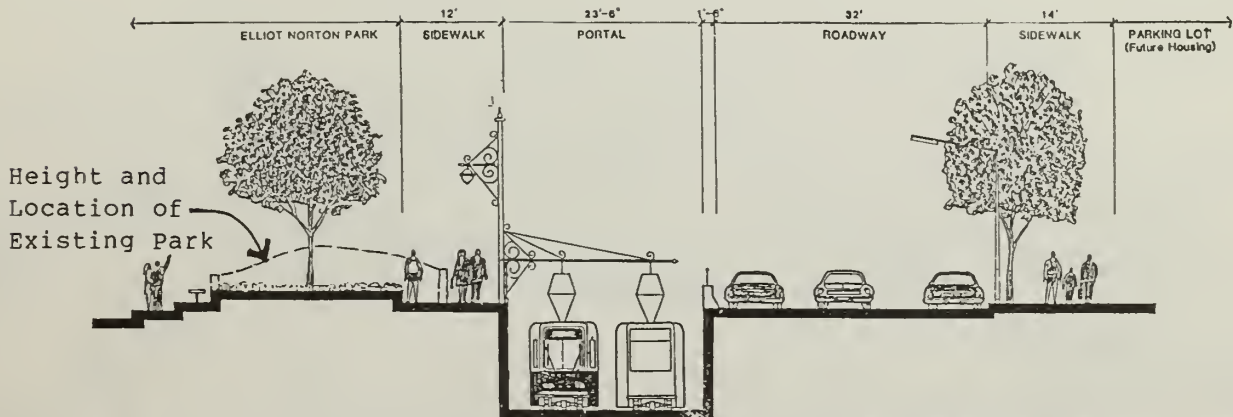


Chinatown



SURFACE OPTION

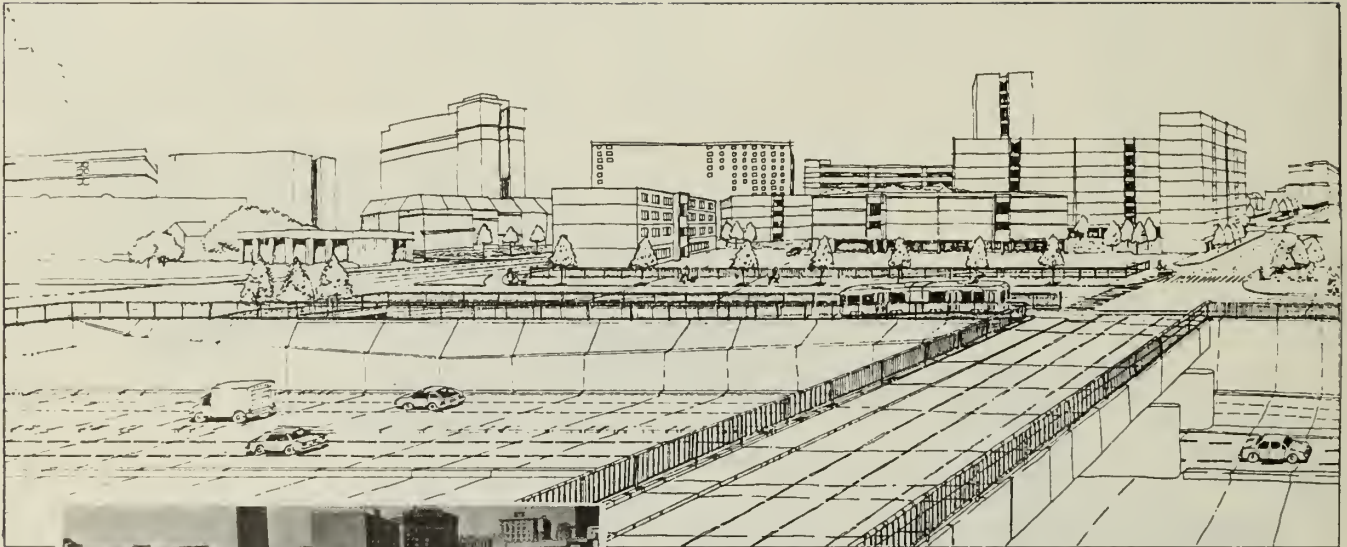
The above view shows Tremont Street in Chinatown with the light rail coming out of an existing tunnel by Elliot Norton Park. The Park could be improved by lowering the existing walls along the sidewalk as shown below.



ELLIOT NORTON PARK CHANGES

For the light rail alternative, the edge of Elliot Norton Park next to Tremont Street could be redesigned to move the high wall adjacent to the sidewalk back and lower it, or remove it completely as is shown above. This would allow for better visibility and access to the Park.

Chinatown



TUNNEL OPTION

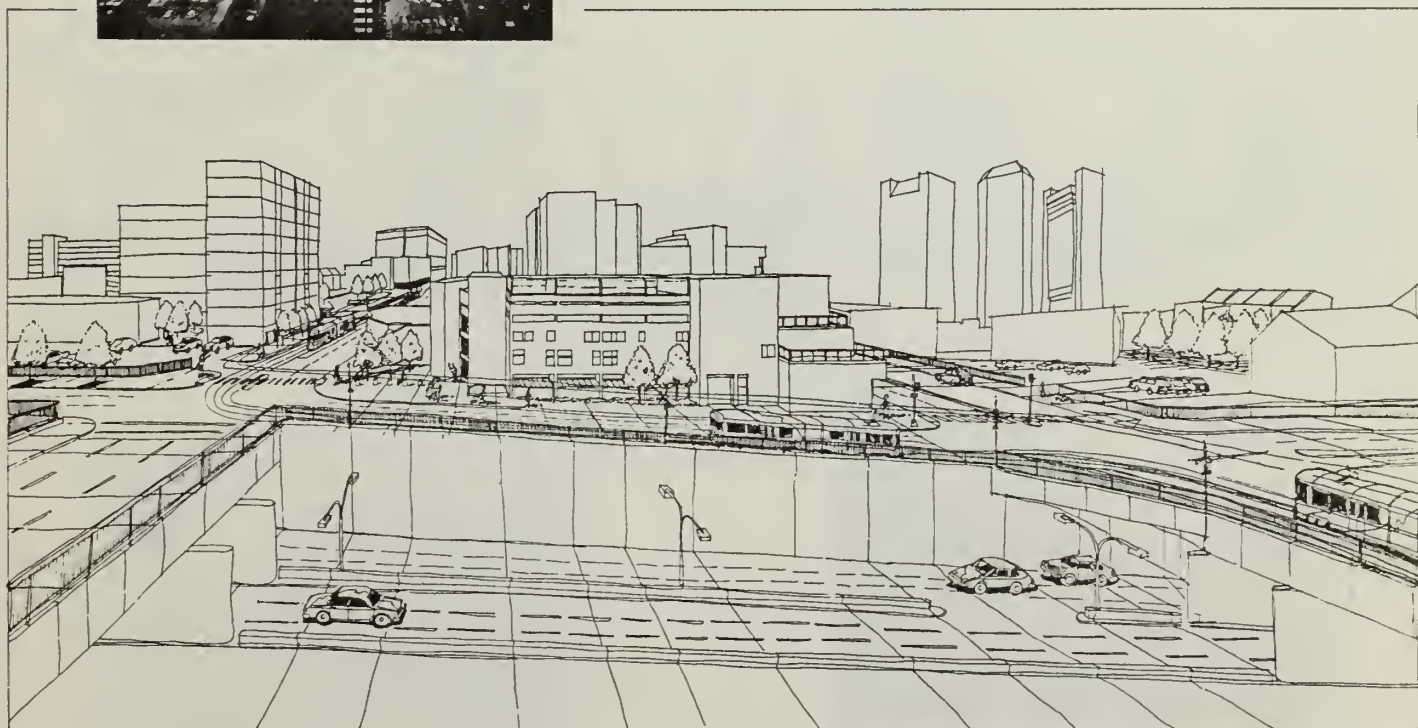
Above is a view of the light rail as it comes to street level along Marginal Road from a tunnel near the Mass. Pike Towers Apartments next to the Turnpike.

With either the surface or the tunnel options, two ways to cross the Turnpike and continue on Washington Street were analyzed. One requires building a diagonal bridge across the Turnpike and the other uses Marginal Road and the existing Washington Street bridge.



DIAGONAL BRIDGE OPTION

Above is a view of a diagonal bridge across the Massachusetts Turnpike that could be built for light rail.



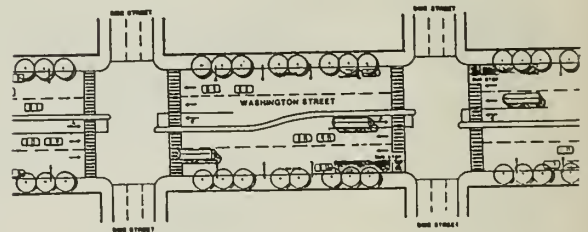
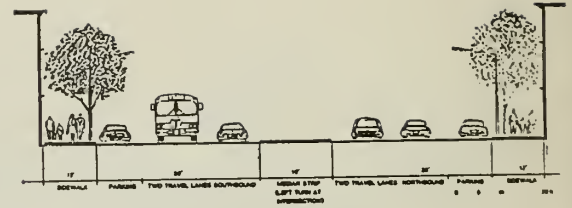
WASHINGTON STREET BRIDGE OPTION

Crossing the Massachusetts Turnpike on the Washington Street Bridge, as shown in the option above, the light rail would continue into the South End.

South End/Lower Roxbury

BUS

Two bus options for replacement service in the South End/Lower Roxbury have been evaluated. One runs a bus route on Washington Street connecting to any of the Downtown routes discussed on page 3. The other is a pair of bus routes: from Ruggles Station on the relocated Orange Line along Melnea Cass Boulevard and Albany Street to South Station; and from Dudley Station along Washington Street, Melnea Cass Boulevard, Tremont Street and the Boston Common to Park Street. In all cases, including light rail, bus routes 10 and 47 will be combined, and modifications are proposed for the Dudley/Harvard (No. 1) and Copley Square/City Hospital (No. 68) bus routes as shown on the Replacement Corridor Service Alternatives plan on page 2.



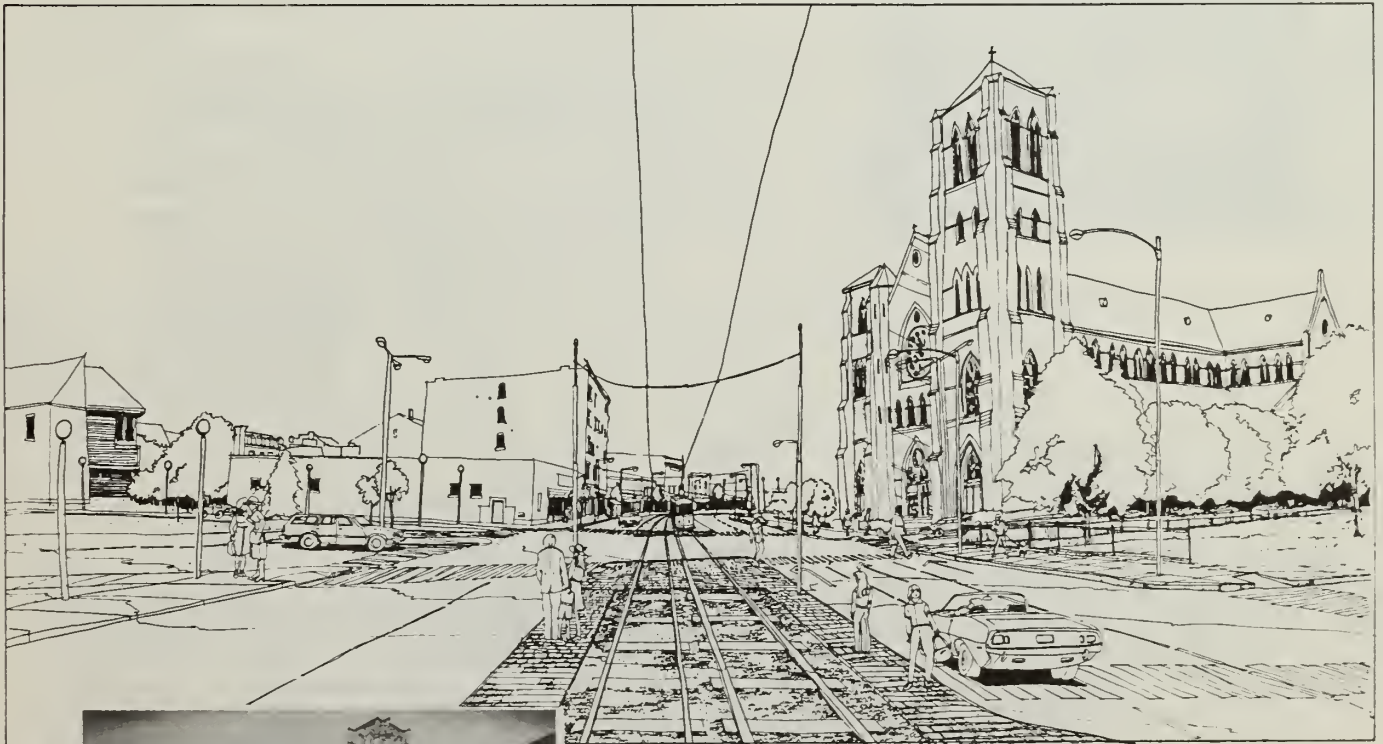
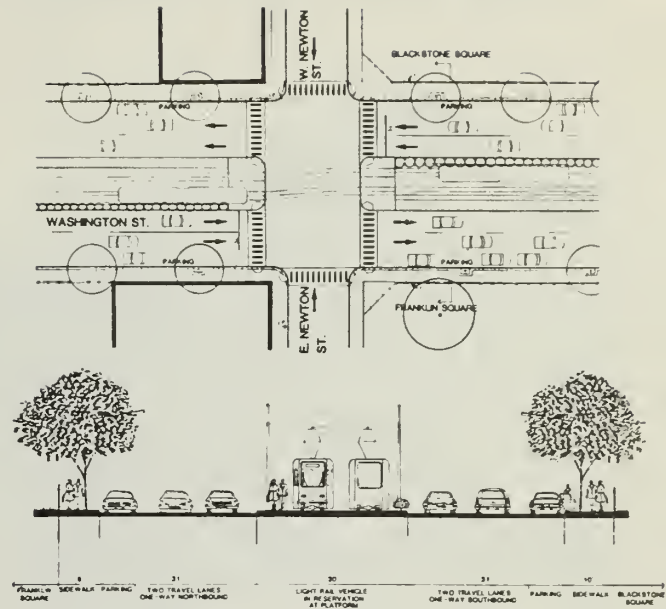
CATHEDRAL- BUS

This option shows Washington Street at the Cathedral of the Holy Cross after removal of the Orange Line elevated and introduction of bus replacement service.

South End/Lower Roxbury

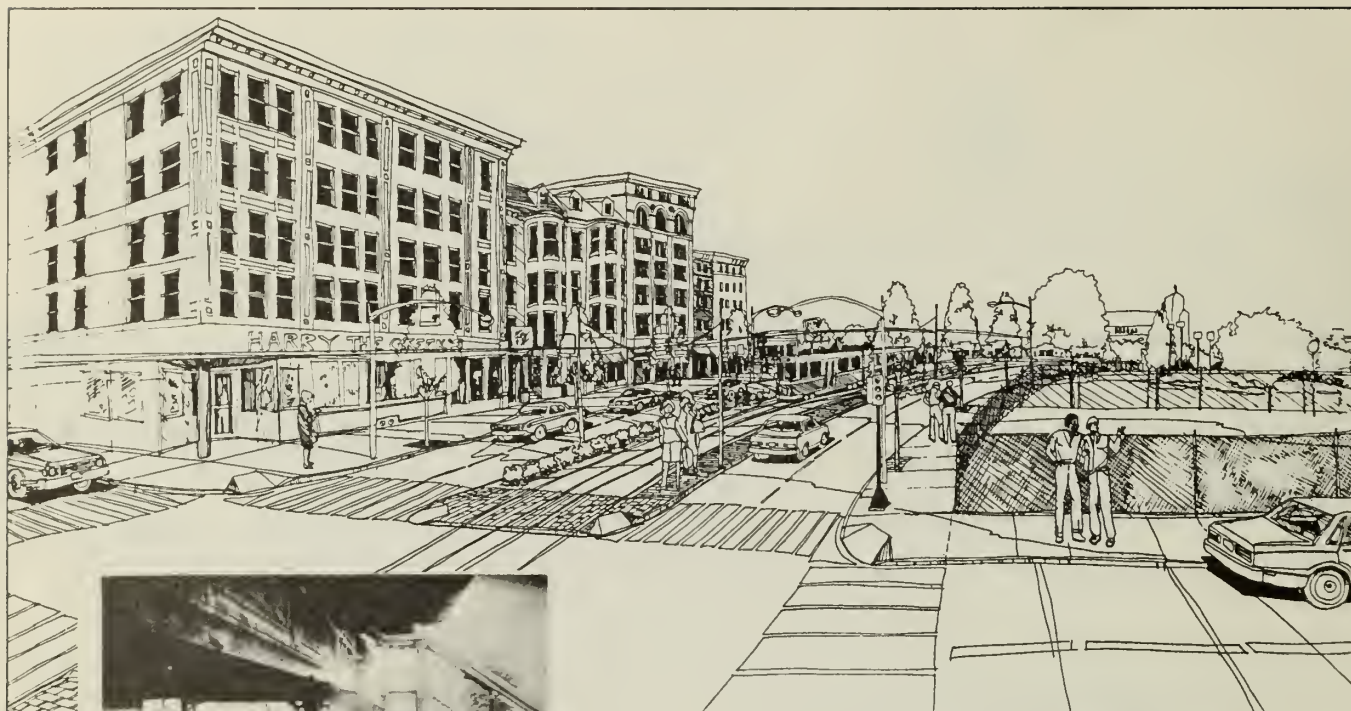
LIGHT RAIL

The light rail alternative in the South End/Lower Roxbury runs along Washington Street from the Massachusetts Turnpike to Melnea Cass Boulevard. Stops are proposed at Berkeley Street, Msgr. Reynolds Way, West Newton Street, Massachusetts Avenue and Lenox Street.



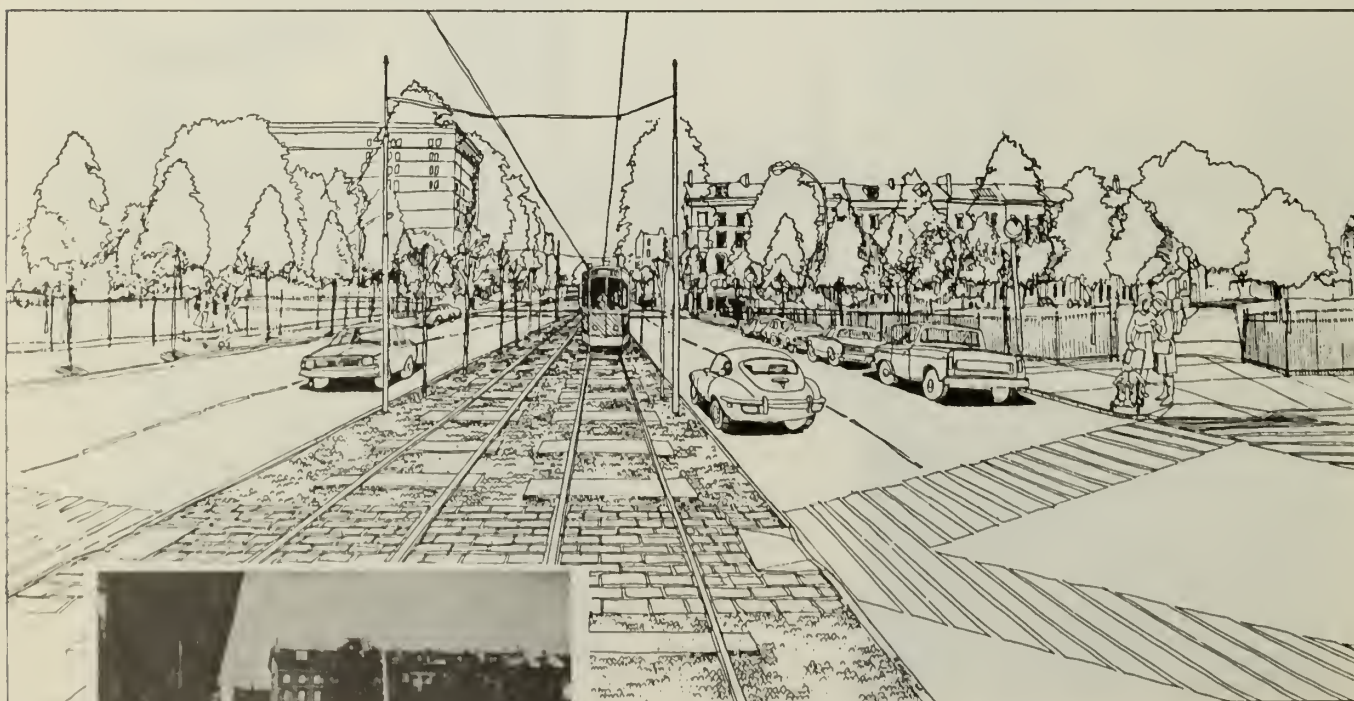
CATHEDRAL-LIGHT RAIL

This view shows an option for the light rail which would travel along the center of Washington Street past the Cathedral of the Holy Cross.



EAST BERKELEY ST.-LIGHT RAIL

Looking north on Washington Street at East Berkeley Street, this view shows the light rail in the street and vehicular access in both directions on the cross street.



BLACKSTONE PARK-LIGHT RAIL

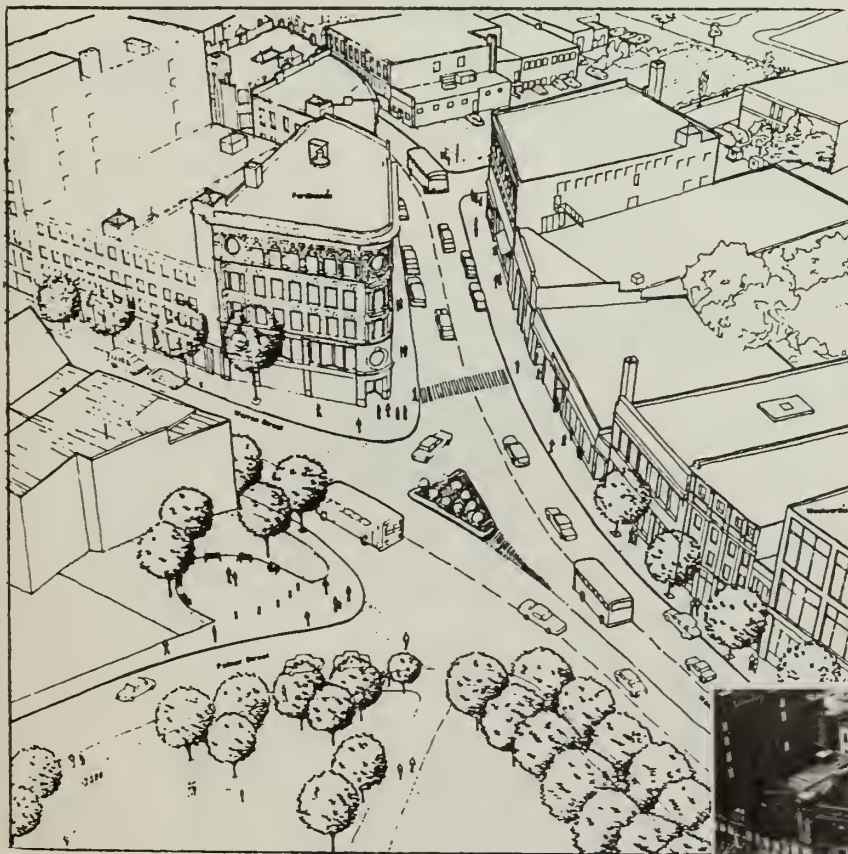
Here the light rail is shown passing by Blackstone Park, with pedestrian access to both sides of Washington Street at the crosswalk.

Dudley Square

BUS

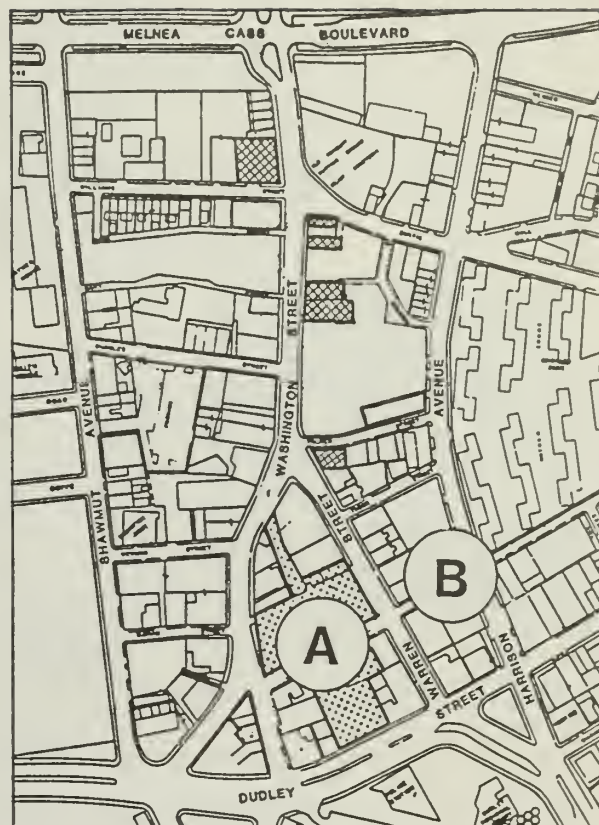
In either bus or light rail alternatives, buses coming from the south and east that now terminate in Dudley Station would be rerouted. These buses will now terminate at the new Ruggles Station on the relocated Orange Line and stop on Dudley Street near the Police Station.

Bus replacement service to Dudley Square from downtown could be provided in two ways: the Washington Street bus or the Tremont Street bus of the paired-bus alternative. Either bus option would enter Dudley Square and terminate in one of two possible locations. The buses could stop at a new street-level facility in the existing station area (A) or at a new off-street bus facility on Ziegler Street (B) between Warren Street and Harrison Avenue.



DUDLEY SQUARE -BUSES

This view shows Washington and Warren Streets after the removal of the elevated structure and the introduction of bus replacement service. A widened and reconstructed Washington Street is shown. Several buildings would be taken to accomplish this widening.

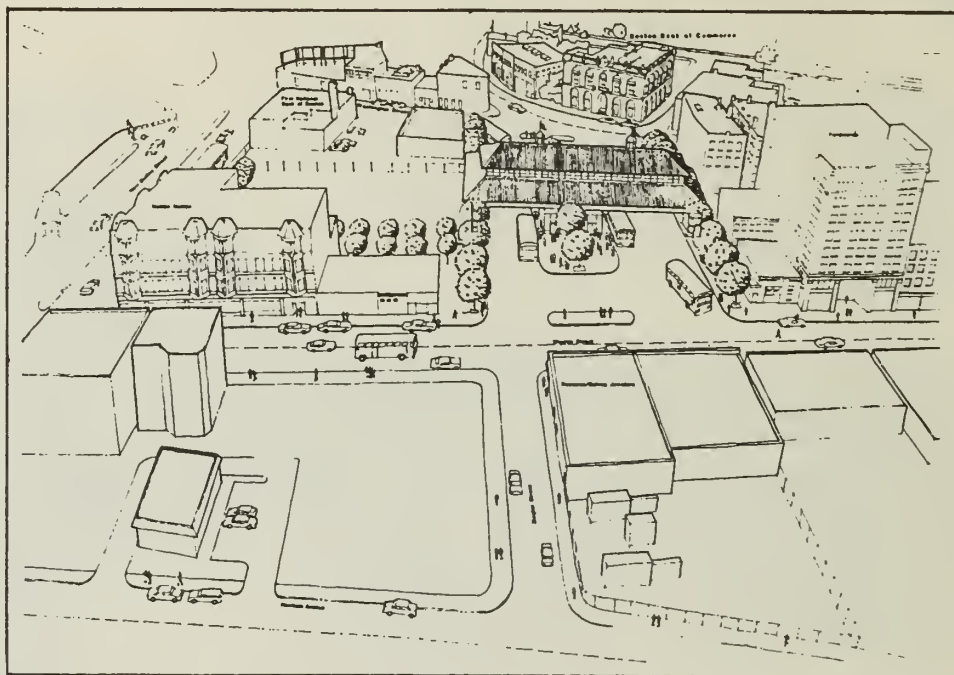
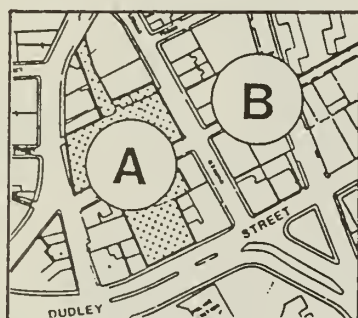


- PROPERTY TAKINGS WHEN STREETS WIDENED
- MBTA OWNED PROPERTY

Under all replacement options, light rail will terminate at the existing station, (location A on map). Replacement Service buses will terminate either at location A or B.

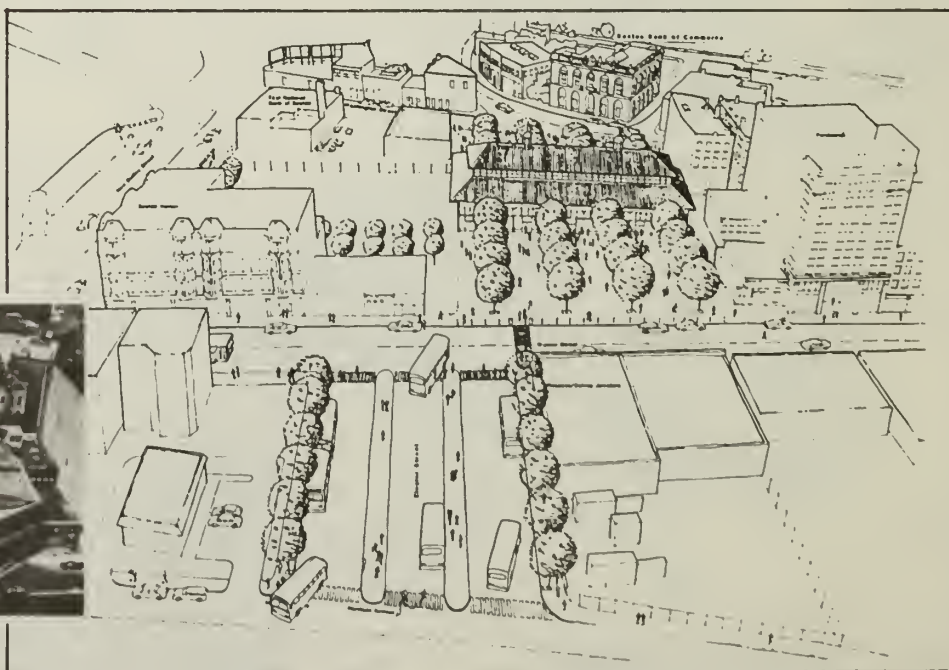


Dudley Square



BUS TERMINAL AT LOCATION A

Here the existing canopy of Dudley Station is used as a bus terminal for both replacement service buses and additional bus routes coming from the north. Buses from the south and east stop on New Dudley Street.



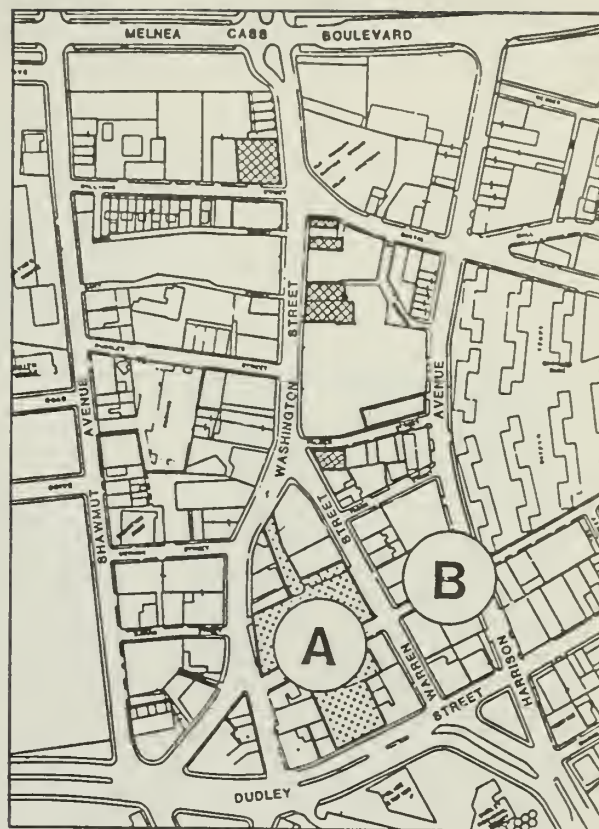
BUS TERMINAL AT LOCATION B



This view shows replacement buses (and others coming from the north) terminating on Ziegler Street. Buses from the south and east stop on New Dudley Street. The existing canopy of Dudley Station would not be part of the bus terminal. Land takings required at Ziegler Street.

Dudley Square

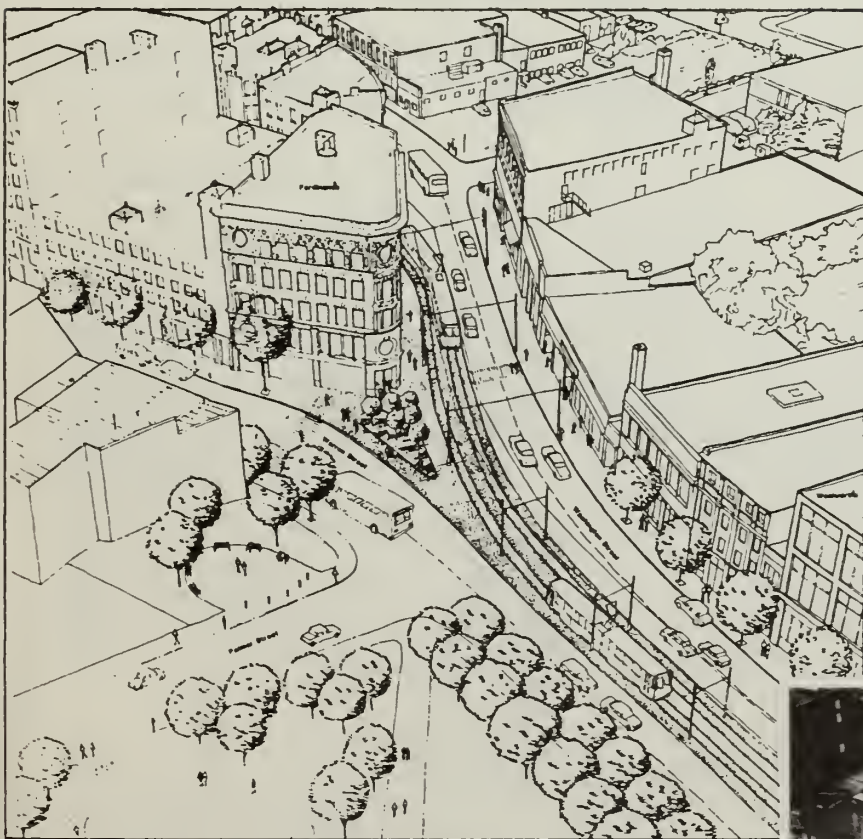
LIGHT RAIL

The light rail would run in a reservation primarily in the middle of Washington Street and would end at a terminal in the existing station area at street level. The reservation would be adjacent to the sidewalk next to the Ferdinand Building just prior to its entering the terminal. Buses coming from the north could stop in the existing station area with the light rail (A) or at a bus facility on Ziegler Street (B) between Warren Street and Harrison Avenue. Locating the buses at Ziegler Street would keep the existing terminal area developable. Buses from the south and east stop on New Dudley Street. Although the reservation would restrict vehicular circulation somewhat, the widened Washington Street would allow for two travel lanes and one parking lane on both sides. Several buildings would be taken to implement the light rail alternative .



-  PROPERTY TAKINGS
-  MBTA OWNED PROPERTY

Under all replacement options, light rail will terminate at the existing station, (location A on map). Replacement Service buses will terminate either at location A or B.

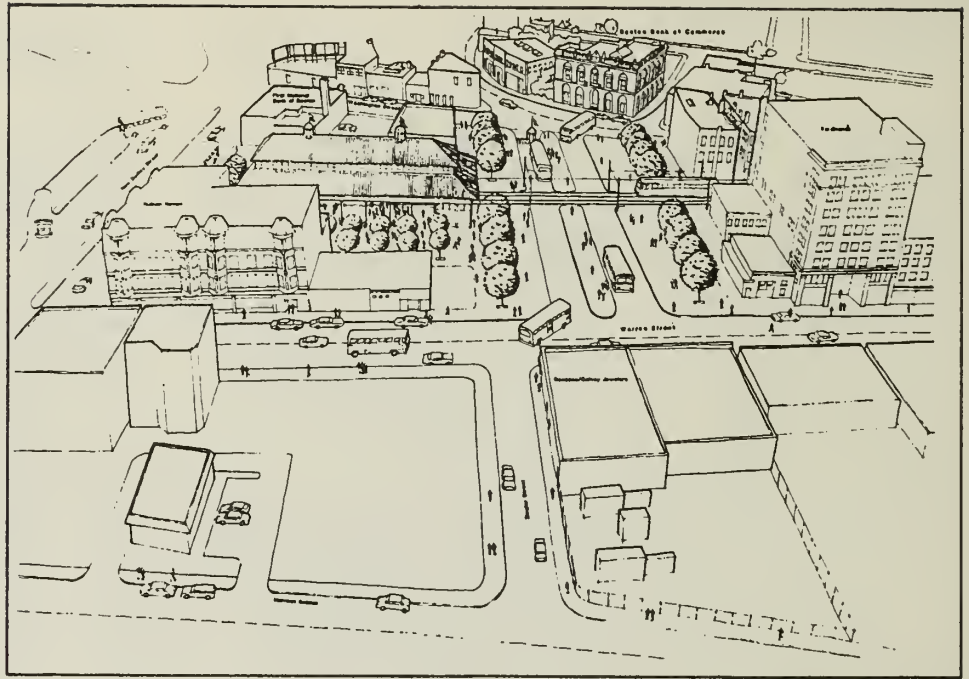
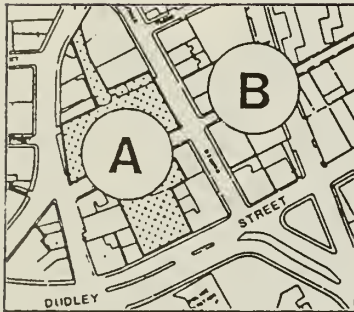


DUDLEY SQUARE-LIGHT RAIL

This view shows Washington and Warren Streets after the removal of the Orange Line and the implementation of light rail replacement service.

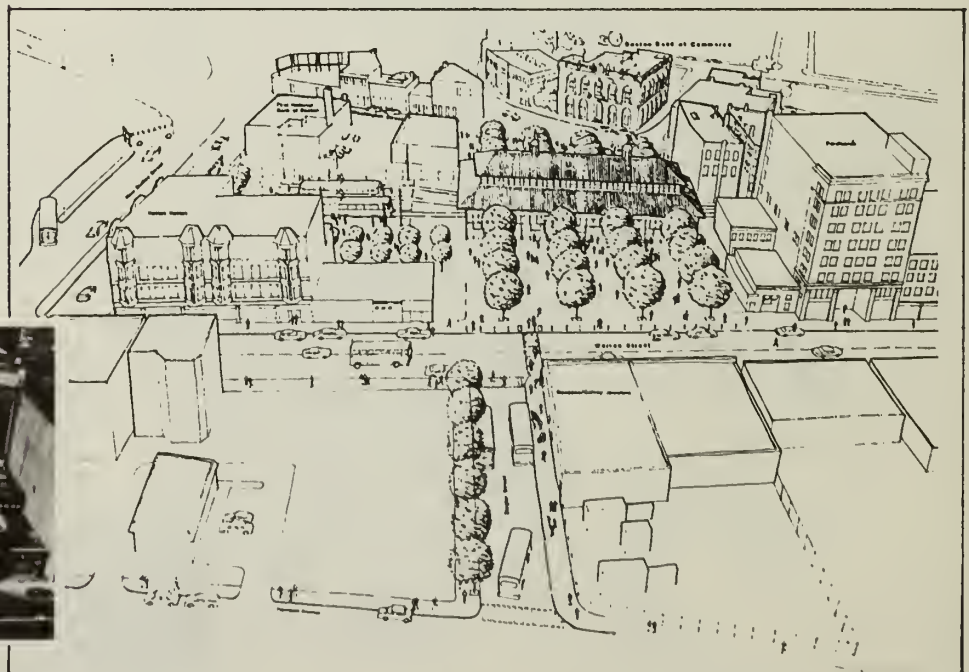


Dudley Square



LIGHT RAIL AND BUS TERMINAL AT LOCATION A

This view shows the existing canopy of Dudley Station as a terminal for light rail.



LIGHT RAIL TERMINAL AT LOCATION A WITH BUS TERMINAL AT LOCATION B

This view shows the Dudley Station area with existing canopy used as a terminal for light rail only, with buses located on Ziegler Street. This requires widening Ziegler Street and closing it to traffic.

COMPARISON OF REPLACEMENT SERVICE ALTERNATIVES

The chart below evaluates the three types of replacement service in a general way. It shows that light rail provides better transit service than the other alternatives, namely, faster ride to downtown and free transfer to other rail lines--but at a price. That price being:

- higher construction cost
- higher operating cost
- greater use of available street space

If the choice were solely predicated upon cost, buses or possibly trackless trolleys would be preferred since they cost less than light rail vehicles and require only limited street modifications. But buses

(continued on next page)

TYPE OF REPLACEMENT SERVICE	BUS					TRACKLESS TROLLEY	LIGHT RAIL
RADIAL ROUTE(S)	WASHINGTON STREET			TREMONT & ALBANY STREETS		WASHINGTON STREET	WASHINGTON STREET
DOWNTOWN ROUTE(S)	SOUTH COVE LOOP	DOWNTOWN LOOP	BOSTON COMMON LOOP	BOSTON COMMON & SOUTH STATION LOOPS	BOSTON COMMON & SOUTH COVE LOOPS	SOUTH COVE LOOP	CENTRAL SUBWAY
Transportation Service							
Downtown Distribution	Poor	Good	Fair	Fair	Fair/Poor	Poor	Best
Free Transfer to other Rail Lines	No	No	No	No	No	No	Yes
Avoids Downtown Traffic Congestion	Yes	No	No	No	Partially	Yes	Yes
Limits Street Capacity	No	No	No	No	No	No	Yes
Limits Cross-Street Circulation	No	No	No	No	No	No	Yes
Trip Time: Dudley to Downtown (minutes)	20.0	18.0	22.6	22.6	20.0	20.0	11.7
Daily Trips - Year 2000 (1)	2,270 (2)	4,950	4,550	2,830	3,010	2,270	9,250
Environmental Impact							
Noise	←----- Most -----					Least	Intermed.
Pollutant Emissions Along Route	←----- Some -----					None	-----
Construction Disruption	←----- Least -----					Intermed.	Most
Property Takings (Land or Buildings)	←----- Some, if street widened in Dudley Square -----					Some	-----
Cost (1984 \$)							
Capital Cost (3) [\$ million]	13.0	14.0	13.8	14.3	13.9	17.6	(4) 38.5- 49.2
Annual Operating Cost [\$ million]	.39	.69	.70	1.23	1.05	.42	.84
Net Operating Cost per Trip [dollars]	.57	.46	.51	1.45	1.16	.62	.30
Equivalent Cost per Trip (5) [dollars]	2.58	1.55	1.67	3.40	2.93	3.52	(4) 1.80- 2.21

- Notes:** (1) With recent estimates of South End and Dudley redevelopment, bus and trackless trolley ridership would increase these figures by 33% and light rail by 42%.
 (2) 4340 with free transfer at South Cove Station to the Orange Line.
 (3) Includes reconstruction of Washington Street from the Massachusetts Turnpike to Dudley Street.
 (4) Lowest cost is for surface option into Tremont Street tunnel using the existing Washington Street bridge. Highest cost is for tunnel option under Elliot Norton Park using a new diagonal bridge over the Turnpike.
 (5) Equivalent Cost equals Amortized Capital Cost plus Net Operating Cost.

COMPARISON OF REPLACEMENT SERVICE ALTERNATIVES (continued)

don't move too well in the downtown area. While some buses now operate in downtown Boston, they do so at a very slow pace, made even slower by the large number of pedestrians and parked cars.

If the light rail line had to run on downtown streets, it would encounter the same problems as the buses--even worse because light rail does not have the maneuverability of buses. If the light rail line were elevated along Washington Street, it would have much of the same blighting effect as the current structure. If it were in tunnel all the way to Dudley Station, the cost of construction (up to \$80 million a mile) would be prohibitive.

Fortunately, the light rail can use a tunnel that already exists in the downtown area. This tunnel was used as part of Boston's Green Line until 1958, when light rail service to Egleston and South Boston was discontinued. Thus the light rail system is planned to run on the street in an exclusive reservation until it approaches the downtown area where it would then enter the tunnel and run underneath Boston's downtown. Without the abandoned tunnel, the light rail alternative would not have been considered as an option.

The trackless trolley has advantages over the bus in terms of less noise and air pollution though it is costlier to implement and operate. Unfortunately, it shares the problems of the bus in being hampered by traffic congestion. It also requires overhead wires (like the light rail) which would not be allowed downtown. It cannot run in the central subway tunnel, because it is not compatible with the operations of the existing system. Finally, there are no maintenance facilities in the replacement corridor. The cost of such a facility would be included in the capital cost of this alternative.

取代橙線架空鐵路服務的研究

一、目的

目前橙線在華盛頓街一段的架空鐵路，快將拆除了。拆除以後，用什么路線代替呢？為了提供一套全面籌劃的公共交通計劃，麻省灣區交通總局特別舉行一項研究，打算先分析一下波士頓南端、樂事百里、北多切時達、和密疊坪等地區此後的交通需求程度。

二、背景

以前本來有打算，要興建一條西南快速公路，以貫通上述地區的。可是，這項提議在一九七二年間，受到波士頓交通策劃審核局否決，而改由目前這段架空鐵路代替。當時麻省的沙津省長，跟當地居民洽商後，同意稍後把這段架空鐵路改道，遷回原由興建西南快速公路而闢出的路線。當時曾經提及幾種取代橙線的措施，也承認多切時達和密疊坪的交通服務，有待改善。這項研究就是打算向這些改善計劃提供必須的資料。

三、研究單位

這項研究由麻省灣區交通總局西南走廊發展廳管理，經理是彼得——加莫得勒先生。協助研究的，還有以太白——愛華——麥加錫——史差頓公司為首的多間顧問公司。

四、研究進度

這項研究的第一個階段，已於一九七七至七八年間完成。它對受影響地區居民紛歧的交通需要作了分析。成果是一九七八年間向麻省市區密集交通管理局提交的報告。該報告羅列了多種輕軌電車和巴士路線，以供選擇。

經過長時期的審核後，麻省市區密集交通管理局批准了交通總局繼續進行研究的第二個階段。第二階段是仔細研究每條候選路線在物理結構、社會、生態環境、和營運等各方面的特性。

有關巴士、電纜巴士、和輕軌電車的詳細分析，經已竣工，並于一九八四至八五年間，召開多次社區會議，介紹和討論每條候選路線的優勢，徵集了居民的意見。第二階段的研究成果，將以候選路線分析——對生態環境的影響報告草案為題發表。一九八五年秋天將再舉行一次公眾聽會，最後一次徵集社區意見，以便把草案定稿，並建議撥款那一條路線，然後麻省灣區交通總局才能籌款興建。

五、如何取得進一步資料

夾着這份傳單的小冊子上，印有每條候選路線的特性簡介。如欲進一步了解詳情，請向波士頓公共圖書館各分館，或有關社區機構，索閱候選路線分析——對生態環境的影響報告草案。



取代或/與改良運輸路線的研究

SOUTH END

ROXBURY

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replacement/transit improvement study

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COMMUNITY INVOLVEMENT

We planned a series of community meetings in the study area so that you could be heard. We scheduled presentation/question and answer sessions on the agendas with existing neighborhood community groups at their regular meetings. We also had joint meetings of several community groups in the study area. Finally, we held meetings oriented to getting representatives from all parts of the study area together.

WHY SHOULD I BE INVOLVED?

To keep informed of what's happening in your neighborhood and to influence decisions made on your future public transportation. Community acceptance played a very important part in selecting alternatives for further evaluation in Phase I and refinement of the alternatives analyzed in Phase II.

HOW CAN I BE INVOLVED?

The testimony of community groups and residents at the Public Hearing to be held in the Fall of 1985 will play a role in selection of the preferred alternative for replacement service.

Give us a call! 427-7060 Find out what is going on and get on our mailing list! Tell us what you think about improvements to your transportation system.

This pamphlet prepared by:

CBT/Childs Bertman Tseckares & Casendino Inc.
Community Liaison Consultants



replacement/transit improvement study

SOUTH END

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